

AMENDMENTS TO THE CLAIMS

LISTING OF CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A system for radially positioning a workpiece for electrochemical machining, the system comprising: a base having a cavity to hold the workpiece, the cavity having an electrode contact therein, a pressurized air chamber configured to contain pressurized air; and an expandable diaphragm configured to position the workpiece radially relative to an electrode assembly in response to the pressurized air being released into the pressurized air chamber, wherein the workpiece is positioned by the system to permit electrochemical machining of the electrode assembly.

2. (Original) The system of claim 1, further comprising a workpiece surface configured to receive the workpiece when the workpiece is loaded into the system such that the workpiece sits upon the workpiece surface.

3. (Original) The system of claim 2, further comprising a clamping ring configured to clamp the workpiece against the workpiece surface.

4. (Original) The system of claim 3, wherein the workpiece surface includes an anode contact to which the workpiece is electrically coupled when clamped against the workpiece surface.

5. (Original) The system of claim 1, further comprising a pressurized air port coupled to the pressurized air chamber, the pressurized air being released into the pressurized air chamber through the pressurized air port.

6. (Original) The system of claim 1, wherein the expandable diaphragm includes a thin wall configured to deflect in response to the pressurized air being released into the pressurized air chamber, the deflection causing the workpiece to position radially relative to the electrode assembly.

7. (Original) The system of claim 6, wherein the deflection is approximately 75 microns.
8. (Original) The system of claim 6, wherein the thin wall has a thickness of approximately 150 microns.
9. (Original) The system of claim 8, wherein the thickness of the thin wall does not vary by more than approximately 5-10 microns in any one place.
10. (Original) The system of claim 1, wherein the expandable diaphragm radially positions the workpiece with an accuracy of approximately 2 microns.
11. (Withdrawn) A method for radially positioning a workpiece for electrochemical machining, the method comprising: deflecting a thin wall of an expandable diaphragm, the deflection causing the workpiece to position radially relative to an electrode assembly.
12. (Withdrawn) The method of claim 11, further comprising the step of releasing pressurized air into a pressurized air chamber, the pressurized air causing the thin wall to deflect.
13. (Withdrawn) The method of claim 11, further comprising the step of placing the workpiece within a locating area such that the workpiece sits upon a workpiece surface.
14. (Withdrawn) The method of claim 13, further comprising the step of clamping the workpiece against the workpiece surface.
15. (Withdrawn) The method of claim 14, wherein the workpiece surface includes an anode contact to which the workpiece is electrically coupled when clamped against the workpiece surface.
16. (Currently amended) A system for radially positioning a workpiece for electrochemical machining, the system comprising: a base having a cavity to hold the workpiece, the cavity having an electrode contact therein, a pressurized air chamber for deflecting a thin wall of an expandable diaphragm, the deflection causing the workpiece to position radially relative to an electrode assembly, wherein the workpiece is positioned by the system to permit electrochemical machining of the electrode assembly.

17. (Previously presented) The system of claim 16, further comprising an air port for releasing a pressurized air into a pressurized air chamber.

18. (Canceled)

19. (Currently amended) The system of claim [[18]] 17, further comprising a clamping ring for clamping the workpiece against the workpiece surface.

20. (Original) The system of claim 19, wherein the workpiece surface includes an anode contact to which the workpiece is electrically coupled when clamped against the workpiece surface.

21. (Previously presented) The system of claim 1, further comprising an electrode passage for passing a conductive electrolyte to or from the workpiece for electrochemical machining.

22. (Previously presented) The system of claim 1, wherein the expandable diaphragm when pressurized forms a hydraulic seal between the expandable diaphragm and the workpiece about an entire outer circumference of the workpiece.

23. (Currently amended) The system of claim 1, further comprising a clamping ring that is adapted to be [[lower]] lowered on top of the workpiece.